Index to Instrumentation Technology, Volume 26, 1979

Subject

acoustic emission
Dec 43

advanced control
Jan 29; Jan 41; May 52; Sep 81

analog control
Dec 39

atomic absorption analyzers
Jul 38

batch process control
Jul 58

boiler control
Jun 55; Dec 30; Dec 35

CAMAC
Jan 37

chromatographs
Jul 38; Jul 47

combustion controls
Mar 47; Dec 35

control strategies
Jan 22; Feb 37; Feb 41; Apr 32; Apr 39; May 52; Jun 55; Sep 81; Dec 39

control systems
Mar 35; Mar 41

control valves
Jun 62; Aug 55; Nov 55

CRT displays
Feb 28

data acquisition
Aug 51; Oct 47

density measurement
Sep 63

differential pressure instrumentation
Aug 32; Sep 63; Nov 40

digital control
Jan 22; Jan 37; Jan 41; Mar 30; Mar 35; Apr 32; Apr 39; Apr 49; May 28; May 43; May 52; Jul 47; Sep 52; Oct 32; Oct 41; Dec 39

distillation control
Jun 55

distributed control
Jan 37; Jan 41; Mar 30; May 43; Sep 52; Oct 32; Oct 41

dynamic measurements
Aug 51

energy management
Jan 22; Mar 30; Mar 35; Mar 41; Mar 47; Jun 50; Dec 35

failure detection
Dec 43

fault tolerance
Oct 32

feedwater controls
Dec 30

final control elements
Jun 62; Aug 55; Nov 55

flow instrumentation
Jun 65; Nov 40; Nov 62

gas chromatography
Jul 38

level instrumentation
Apr 45; Sep 63

liquid chromatography
Jul 38

mass spectrometers
Jul 38

microprocessors
Jan 41; May 43; Sep 52

operator interfaces
Feb 28; Feb 37; Apr 49; Sep 57

operator training
Sep 57

optimization
Jul 47

pH control
Sep 75

photometers
Jul 38

pipeline control
Jun 50; Jun 65

power plant control
Jun 70; Dec 30

pressure instrumentation
Jun 65; Aug 32; Aug 51; Sep 63

pressure recovery
Aug 55

pressure regulators
Sep 71

pressure relief
Sep 71

primary flow elements
Nov 40

process analyzers
Jan 29; Mar 47; Jul 38; Jul 47; Sep 75; Oct 47

process control
Feb 41; Mar 30

programmable controllers
Jul 53; Jul 58

pump control
Jun 50; Jun 65

relay logic
Jul 53

reliability
Jan 41; May 43; Jun 70; Jul 53; Oct 32; Dec 43

simulation
Sep 57

solar energy
Mar 41

standardization
Jan 37

technology transfer
Jan 29

temperature instrumentation
Jan 29

ultrasonic flowmeters
Nov 62

valve sizing
Nov 55

viscosity measurement
Sep 63

wastewater treatment
Apr 32; Apr 39; Sep 75; Oct 47

water treatment
Jul 53

weighing systems
Jul 58

Authors	Issue, Page
Adler, R.B.	Jun 70
Ballotti, E.F.	Apr 39
Baumann, H.D.	Jun 62
Beaverstock, M.C.	Apr 49
Bennett, C.E.	Jul 58
Boehl, H.E.	Dec 35
Bristol, E.H.	Jan 41
Brooks, R.	Oct 47
Buckwalter, R.K.	Jun 65
Bustard, J.F.	Jun 70
Cohn, A.R.	Sep 71
Conger, G.F.	Jan 37
Darsey, D.M.	Mar 41
Davalloo, P.	Sep 75
Eisenberg, L.	Jun 70
Farrington, S.	Dec 30
Fertik, H.A.	Sep 57
Garrett, L.T.	Oct 41
Gelineau, F.D.	Dec 35
Griffin, D.E.	Jul 47
Hampel, J.	Dec 39
Jutila, J.M.	Jul 38
Kelleher, A.J.	Jun 70
Krigman, A.S.	Jan 22
Liu, J.K.	Jun 50
Lockert, C.F.	Jul 58
Lynnworth, L.C.	Nov 62
Mariam, P.L.	Apr 45
Martin, J.A.	Jul 53
Miller, J.G.	Sep 52
Nalley, R.R.	Sep 71
Nelson, M.D.	Apr 39
Nisenfeld, A.E.	Feb 41
Nishioka, K.	Oct 47
Noroozi, M.	Sep 75
Noyes, L.R.	Jun 70
O'Meara Jr., J.E.	Mar 47
Price, J.F.	Jul 53
Quance, R.A.	Nov 55
Romeu, F.J.	May 43
Rose, C.W.	Oct 32
Rountree, R.C.	Mar 41
Ruzic, N.P.	Jan 29
Schneider, H.W.	Apr 49
Sheahan, R.R.	Mar 41
Sheridan, T.B.	Feb 37
Skrokov, M.R.	Mar 30
Slomiana, M.	Aug 32; Sep 63; Nov 40
Soderstrand, M.A.	Mar 41
Spare, J.H.	Jun 70
Spitz, D.A.	Sep 81
Staff	Feb 28; May 28
Stassen, H.G.	Apr 49
Sundt, P.	Dec 43
Taylor, J.L.	Aug 51
Thor, M.G.	Mar 30
Tsing, J.Y.	May 52
Tu, F.C.	May 52
Uffer, R.A.	Dec 30
Watson, A.	Jun 55
Webb, P.U.	Jul 47
Weiss, M.D.	Mar 30
Wells, C.H.	Apr 32
Winarski, C.P.	Mar 41
Wing, P.	Aug 55
Younkin, C.S.	Apr 39
Zvolner, S.M.	Mar 35

Articles	Page
January	
Instrumentation: Where are we going?	22
Technology Transfer: Utilization and Assistance Opportunities	29
CAMAC: A Case for Digital Standards	37
Organization and Disciplines for Distributed Process Control	41
February	
Selecting CRT-based Process Interfaces	28
Interface Needs for the Coming Industrial Controls	37
Unit Ops as Building Blocks: A Plan for System Design	41
March	
Energy Management in Process Plants through Distributed Control	30
Conserving Energy through Computerized Building Automation	35
Developing Master Controls for a Central Receiver Solar Power Plant	41
Oxygen Trim for Combustion Control	47
April	
Computer Control of Fully Nitrifying Activated Sludge Processes	32
Computer Strategies for Controlling the Activated Sludge Process	39
Measuring Level In Hostile or Corrosive Environments	45
Modeling the Operator: A Needed Approach to Interface Design	49
May	
Selecting Digital Control Systems	28
Reliability of Process Measurement and Control	43
Synthesizing a Digital Algorithm for Optimized Control	52
June	
Controlling Pipeline Pumps for Energy Efficiency	50
Comparing Distillation Column and Steam Generator Control Strategies	55
Final Control Elements: Progress and Prognostications	62
Instrumentation for Slurry Pipelines	65
Determining Reliability of Service to Electricity Consumers	70
July	
Multicomponent On-Stream Analyzers for Process Monitoring and Control	38
Process Chromatographs and Computers in Optimizing Control Systems	47
Control Technologies for Small Plants: Cost, Reliability, and Versatility	53
Evaluating Control Equipment for Batch Processes	58
August	
Selecting Differential Pressure Instrumentation	32
Improving Data Acquisition in Dynamic Measurements	51
Determing And Using the Control Valve Pressure Recovery Factor	55
September	
The Once and Future Evolution of Distributed Control	52
Using a Process Control Language for Operator Training and Engineering Simulations	57
Using Differential Pressure Sensors for Level, Density, Interface, and Viscosity Measurements	63
Using Regulators for Pressure Relief	71
Neutralizing Industrial Waste with Conventional Controllers: A Pilot Plant Study	75
A Generalized Disturbance Spectrum for Process Control System Studies	81
October	
Achieving Reliability through Fault Tolerant Distributed Control	32
Planning for Integrated Distributed Control	41
Automated In-Situ Water Quality Monitoring	47
November	
Selecting Pressure and Velocity Head Primary Elements for Flow Measurement	40
Collecting Data for Control Valve Sizing	55
A Checklist of Ultrasonic Flowmeters	62
December	
Specifying Feedwater Controls for Power Plant Applications	30
Control System Design for a Wood Burning Industrial Steam Generator	35
Using Digital Logic in Analog Control Systems	39
Monitoring Acoustic Emission to Detect Mechanical Defects	43

Index to Instrumentation Technology, Volume 26, 1979

Subject

acoustic emission
Dec 43

advanced control
Jan 29; Jan 41; May 52; Sep 81

analog control
Dec 39

atomic absorption analyzers
Jul 38

batch process control
Jul 58

boiler control
Jun 55; Dec 30; Dec 35

CAMAC
Jan 37

chromatographs
Jul 38; Jul 47

combustion controls
Mar 47; Dec 35

control strategies
Jan 22; Feb 37; Feb 41; Apr 32; Apr 39; May 52; Jun 55; Sep 81; Dec 39

control systems
Mar 35; Mar 41

control valves
Jun 62; Aug 55; Nov 55

CRT displays
Feb 28

data acquisition
Aug 51; Oct 47

density measurement
Sep 63

differential pressure instrumentation
Aug 32; Sep 63; Nov 40

digital control
Jan 22; Jan 37; Jan 41; Mar 30; Mar 35; Apr 32; Apr 39; Apr 49; May 28; May 43; May 52; Jul 47; Sep 52; Oct 32; Oct 41; Dec 39

distillation control
Jun 55

distributed control
Jan 37; Jan 41; Mar 30; May 43; Sep 52; Oct 32; Oct 41

dynamic measurements
Aug 51

energy management
Jan 22; Mar 30; Mar 35; Mar 41; Mar 47; Jun 50; Dec 35

failure detection
Dec 43

fault tolerance
Oct 32

feedwater controls
Dec 30

final control elements
Jun 62; Aug 55; Nov 55

flow instrumentation
Jun 65; Nov 40; Nov 62

gas chromatography
Jul 38

level instrumentation
Apr 45; Sep 63

liquid chromatography
Jul 38

mass spectrometers
Jul 38

microprocessors
Jan 41; May 43; Sep 52

operator interfaces
Feb 28; Feb 37; Apr 49; Sep 57

operator training
Sep 57

optimization
Jul 47

pH control
Sep 75

photometers
Jul 38

pipeline control
Jun 50; Jun 65

power plant control
Jun 70; Dec 30

pressure instrumentation
Jun 65; Aug 32; Aug 51; Sep 63

pressure recovery
Aug 55

pressure regulators
Sep 71

pressure relief
Sep 71

primary flow elements
Nov 40

process analyzers
Jan 29; Mar 47; Jul 38; Jul 47; Sep 75; Oct 47

process control
Feb 41; Mar 30

programmable controllers
Jul 53; Jul 58

pump control
Jun 50; Jun 65

relay logic
Jul 53

reliability
Jan 41; May 43; Jun 70; Jul 53; Oct 32; Dec 43

simulation
Sep 57

solar energy
Mar 41

standardization
Jan 37

technology transfer
Jan 29

temperature instrumentation
Jan 29

ultrasonic flowmeters
Nov 62

valve sizing
Nov 55

viscosity measurement
Sep 63

wastewater treatment
Apr 32; Apr 39; Sep 75; Oct 47

water treatment
Jul 53

weighing systems
Jul 58

Authors	Issue, Page
Adler, R.B.	Jun 70
Ballotti, E.F.	Apr 39
Baumann, H.D.	Jun 62
Beaverstock, M.C.	Apr 49
Bennett, C.E.	Jul 58
Boehl, H.E.	Dec 35
Bristol, E.H.	Jan 41
Brooks, R.	Oct 47
Buckwalter, R.K.	Jun 65
Bustard, J.F.	Jun 70
Cohn, A.R.	Sep 71
Conger, G.F.	Jan 37
Darsey, D.M.	Mar 41
Davalloo, P.	Sep 75
Eisenberg, L.	Jun 70
Farrington, S.	Dec 30
Fertik, H.A.	Sep 57
Garrett, L.T.	Oct 41
Gelineau, F.D.	Dec 35
Griffin, D.E.	Jul 47
Hampel, J.	Dec 39
Jutila, J.M.	Jul 38
Kelleher, A.J.	Jun 70
Krigman, A.S.	Jan 22
Liu, J.K.	Jun 50
Lockert, C.F.	Jul 58
Lynnworth, L.C.	Nov 62
Mariam, P.L.	Apr 45
Martin, J.A.	Jul 53
Miller, J.G.	Sep 52
Nalley, R.R.	Sep 71
Nelson, M.D.	Apr 39
Nisenfeld, A.E.	Feb 41
Nishioka, K.	Oct 47
Noroozi, M.	Sep 75
Noyes, L.R.	Jun 70
O'Meara Jr., J.E.	Mar 47
Price, J.F.	Jul 53
Quance, R.A.	Nov 55
Romeu, F.J.	May 43
Rose, C.W.	Oct 32
Rountree, R.C.	Mar 41
Ruzic, N.P.	Jan 29
Schneider, H.W.	Apr 49
Sheahan, R.R.	Mar 41
Sheridan, T.B.	Feb 37
Skrokov, M.R.	Mar 30
Slomiana, M.	Aug 32; Sep 63; Nov 40
Soderstrand, M.A.	Mar 41
Spare, J.H.	Jun 70
Spitz, D.A.	Sep 81
Staff	Feb 28; May 28
Stassen, H.G.	Apr 49
Sundt, P.	Dec 43
Taylor, J.L.	Aug 51
Thor, M.G.	Mar 30
Tsing, J.Y.	May 52
Tu, F.C.	May 52
Uffer, R.A.	Dec 30
Watson, A.	Jun 55
Webb, P.U.	Jul 47
Weiss, M.D.	Mar 30
Wells, C.H.	Apr 32
Winarski, C.P.	Mar 41
Wing, P.	Aug 55
Younkin, C.S.	Apr 39
Zvolner, S.M.	Mar 35

Articles	Page
January	
Instrumentation: Where are we going?	22
Technology Transfer: Utilization and Assistance Opportunities	29
CAMAC: A Case for Digital Standards	37
Organization and Disciplines for Distributed Process Control	41
February	
Selecting CRT-based Process Interfaces	28
Interface Needs for the Coming Industrial Controls	37
Unit Ops as Building Blocks: A Plan for System Design	41
March	
Energy Management in Process Plants through Distributed Control	30
Conserving Energy through Computerized Building Automation	35
Developing Master Controls for a Central Receiver Solar Power Plant	41
Oxygen Trim for Combustion Control	47
April	
Computer Control of Fully Nitrifying Activated Sludge Processes	32
Computer Strategies for Controlling the Activated Sludge Process	39
Measuring Level In Hostile or Corrosive Environments	45
Modeling the Operator: A Needed Approach to Interface Design	49
May	
Selecting Digital Control Systems	28
Reliability of Process Measurement and Control	43
Synthesizing a Digital Algorithm for Optimized Control	52
June	
Controlling Pipeline Pumps for Energy Efficiency	50
Comparing Distillation Column and Steam Generator Control Strategies	55
Final Control Elements: Progress and Prognostications	62
Instrumentation for Slurry Pipelines	65
Determining Reliability of Service to Electricity Consumers	70
July	
Multicomponent On-Stream Analyzers for Process Monitoring and Control	38
Process Chromatographs and Computers in Optimizing Control Systems	47
Control Technologies for Small Plants: Cost, Reliability, and Versatility	53
Evaluating Control Equipment for Batch Processes	58
August	
Selecting Differential Pressure Instrumentation	32
Improving Data Acquisition in Dynamic Measurements	51
Determing And Using the Control Valve Pressure Recovery Factor	55
September	
The Once and Future Evolution of Distributed Control	52
Using a Process Control Language for Operator Training and Engineering Simulations	57
Using Differential Pressure Sensors for Level, Density, Interface, and Viscosity Measurements	63
Using Regulators for Pressure Relief	71
Neutralizing Industrial Waste with Conventional Controllers: A Pilot Plant Study	75
A Generalized Disturbance Spectrum for Process Control System Studies	81
October	
Achieving Reliability through Fault Tolerant Distributed Control	32
Planning for Integrated Distributed Control	41
Automated In-Situ Water Quality Monitoring	47
November	
Selecting Pressure and Velocity Head Primary Elements for Flow Measurement	40
Collecting Data for Control Valve Sizing	55
A Checklist of Ultrasonic Flowmeters	62
December	
Specifying Feedwater Controls for Power Plant Applications	30
Control System Design for a Wood Burning Industrial Steam Generator	35
Using Digital Logic in Analog Control Systems	39
Monitoring Acoustic Emission to Detect Mechanical Defects	43